

Chuck Evans

Lacey, Washington

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Interviewed by Jim King

We are in the home of Chuck and Maggie Evans in Lacey, Washington; talking about some of the things we did together and go back a little and talk about places like Delta Manitoba and the flyway biologist program.

Evans: Delta was an interesting place. Hal _____ was a very forceful person. Not very easy to relate to as a student. Lyle Sowl was much easier and some people were able to do their work at Delta and ride through it. Others, like myself, did better out in the field. I picked a study area some distance from Manitoba, from Delta out in the pothole country and did the work through Delta; went to seminars at Delta and had pretty good contact with them. Now the station has a study area not far from where mine was set up. There were several other studies done in the area that I used out there. Lots and lots of potholes, very stable so it didn't go dry readily.

King: What was the name of that?

Evans: Minidosa Rosemeat. Named after a school. Some of the people that we knew are still there. Nolan Parrott, when I last talked to him, was back there and he had talked to a couple of the farmers. I didn't but I probably should have.

King: Were you doing canvasback studies then?

Evans: It was general duck studies. What we were trying to do was determine the relationship of ponds of various sizes and permanence to production of ducks. The hypothesis was that a duck that nested near one pond would not always raise her brood at that pond. She might move through several ponds during the maturation of that brood.

What we did was develop a system of injecting aniline dye into the eggs of the duck just before they hatched. Most dyes were too toxic but they were able to find some way to mark the birds without killing them. It was fun. I remember Bob McCabe when a bunch of bright red canvasbacks swam out at his feet. He was really startled. It lasted for about five weeks then they were hard to recognize.

King: Then, did they move around?

Evans: Oh, yes. It was not common for them to stay in one spot. We lost most of them actually. They would just wonder off. It was a big country when _____ - was trying to find a bird in the middle of it.

King: What year was that?

Evans: It was in 1949. Then when we finished that, and I got my degree, I went on with the Fish and Wildlife Service in a very similar study with the River Basin Studies in South Dakota. After the first year, Ken Black was working with me. We came up with a pretty good study. Essentially the same thing but relaying the various types of cover, size of the pond, and behavior of the ducks. We also marked adults to see whether the adults were faithful to one pond or another and to see how much they moved around. Then we could determine which adults were involved in various broods. We had them both marked which was not common. It was pretty hard to get them both marked. We did that study for three years and then I left and Ken kept it going for another year. I left because I had accepted a job as a flyway biologist with the Service. I was a flyway biologist for a number of years in the Prairies. My wife died in 1955 so I went East with the children to be closer to my parents and wound up conducting the flyway program for the Atlantic Flyway biologists through Widgeon and Quebec and Labrador in Eastern Ontario for two years. Then we gave up on the Widgeon. I had engine failure and it was hard to get it out and we looked the thing over and decided perhaps we needed a smaller airplane so we got a Cessna. We did manage to get a set of floats for it. We couldn't continue the Quebec and Labrador surveys with the Cessna. It was not enough airplane. I went back

to the Prairies with the Cessna. I was in the Prairies in the summer and in the Atlantic Flyway in the winter and a little with the Mississippi Flyway.

When I first went on as a flyway biologist, the Mississippi Flyway was my beat along with Johnny Lynch(?) and working with Johnny Lynch was a real experience. He is a very knowledgeable person; one of the two most expert super cub pilots that I know. One of them being Bob Burkholder who I always figured that he and Johnny approached the problem from different angles. Burkholder would always look at a pond and say “I can get in there and I can get out again.” Johnny would look at one that was a little bigger and he would say, “well, if I can get out of that one then maybe I can try a little one.” As a result, Johnny hardly ever broke an airplane! Poor old Bob, he usually bent a few. Johnny was a very good person to work with and of course he knew his waterfowl ecology very well. A lot of us were sort of aerial survey technicians. As a matter of fact I found that quite interesting. I had various problems in determining what you were able to see from the air. We worked on that a bit.

King: That’s what I thought. You said a lot of the visibility indexes and _____ factors and stuff...

Evans: Actually I worked on that a lot with Jerry Pospashal(?) Jerry, eventually became a flyway biologist. When I worked with him, he didn’t know how to fly but he learned later and he ran the ground studies but was more interested in the problem of what you could see from the air. After the surveys were over, he would climb in the back seat with me and we would go work on some of these things, back and forth. His crew would work on it. We had some good stuff going. No one paid an awful lot of attention to it until a few years later then _____ there was anything to this.

King: I think some of those papers are still in circulation, I see references to them. People are still reading them.

Evans: We didn't do anything very precise but we demonstrated some principles. Then my big chance came along in 1961. I went into the Central Office of River Basin Studies and Tom Schrader, who I worked for and liked a lot, he told me to come on in to the Central Office for a couple of years and then I could go back out into the field again. After I was in there for a couple of weeks, I discovered that that's not so, it doesn't happen. You don't get back out into the field again. I managed to continue pretty much my summer surveys because they didn't have anybody else who could fill in. So I played around in the river and had some good details that were given to the Navy because I wasn't very important for anything else. After a couple of years, a job opened up in Alaska.

King: Did you meet Dave Spencer when you were working the Delta area?

Evans: Yes, he and Eloise were at Delta the summer that I worked there with Lyle Sowl in 1948. We remembered them. We weren't very close. He and Eloise were getting used to the idea of being married. Dave had an airplane up there, an L-5. They played tennis a lot. Phil Newman and Bill and Florence (Bill was game guard for Manitoba). He was a fine person to have around because he would take you off into the bush to see a little different world from the Delta. Delta was a good place to really have a chance to get away from now and then.

King: Well, you know Art Hawkins has said that it was Dave Spencer that started doing the segmented transect with competence limits and of course they were doing this with paper and pencil. Dave doesn't seem to want to claim credit for that.

Evans: The person who did that was Earl _____. He had a little bit of _____ statistics and so he set up all the summer breeding _____ surveys based on segmented concepts(?) with transects at various intervals depending on the density of the waterfowl. We never did what should be done which was to test it as you go to see whether you were working within the right density parameter. It worked. You had to use it with caution because there were an awful lot of problems with the thing. When you

changed observers you might wind up with a tremendous change in indicated populations, because some people see things differently than other people see. They see better or a wider transect. It is difficult to actually calibrate an observer.

King: Jack Hodges transcribed all the Alaska tapes from when I started in 1964. I never erased any of my tapes up through about 1990. He has written a really interesting paper. The interesting thing was that he could certainly show differences in observers but a team working together over a period of days would be very close. Looking back, for years, I had a new observer every single year and he compared all those and the only real change that he found in all those years was when we switched from a standard Beaver to the Turbine Beaver and all of a sudden the indexes went up on all species. It's an interesting study.

Evans: I guess what I should have said rather than an observer, was pilots, because the pilot was the one who would usually set the standard for the crew. I would tend to agree with him that observers do sort of get together and if you can retain the same pilot or least retain one person from the crew from year to year, then you probably have a certain amount of consistency.

King: What I thought about that was that it was sort of like if you don't shoot baskets for a whole year or if you don't do any eye-hand coordination thing, you get rusty and so an old experienced person starting out that year isn't that much ahead of a less experienced person provided they are waterfowl people and do know something about waterfowl. If you take somebody completely cold, that doesn't apply. For the first two-three days both are brushing up on observation skills and then it levels out.

Evans: I think that is probably true, particularly from the standpoint of species identification but from the standpoint of abundance, I'm not sure. There are a lot of odd things that occur. I can remember when Jerry _____ and I were running some checks on each other and we took turns calling in birds while the person in the other seat would listen. I remember I was doing the calling in, running down the transects and

calling in what I saw and Jerry was watching from the back seat and keeping track of what he could see. I remember still his startled voice when I crossed the pothole and I didn't call out anything and he called up from the back seat and said, "didn't you see those three mallard drakes sitting out in the middle of the pothole?" No, I had not seen them. There are certain mechanisms of scanning that are not well understood. Johnny Lynch started running into this when he worked with a phamalogist and apparently you are not mechanically able to scan the depth series of targets efficiently. After you reach a certain density, you can't get them all.

King: Fred Robards and I had a funny experience that way when we were looking for eagle nests on Admiralty Island. We were flying along, I was flying , and we passed this tree with nests in it and Fred said "inactive" and I looked down and could see an eagle in incubating position. So we went round and Fred said "inactive" again. Fred and I never really argued about things but we were in complete disagreement there for about four-five turns until it suddenly emerged that there were two nests in that tree. We both got sucked in; we lost our scan once we had a target.

Evans: Well, who would expect two nests in one tree?

King: Jack Hodges says that does happen one in several hundred nests, rarely, but occasionally.

Evans: One thing also enters this problem is that when you get out in the bush, and of course, most of your flying was in the bush, we Prairie biologists measured the width of a transect by numbers of telephone poles. You could tell by the way the poles were set, how far apart they were and when you could use them as an indicator for the outer edge of your transect. Once you got off the roads, then you would be on your own. How accurate we were in determining the width of transects is anybody's guess. I don't think that really worked out.

King: I think you are right. That maybe had more to do with the variability in people than the ability to identify or catch birds or scan.

Evans: Of course with identification, you can easily demonstrate that that's a problem by looking at the number of green-winged teal that got entered into the records. Try to find one; little dark birds that looks like a bunch of anything is probably a green-winged teal and then of course as you got farther and farther into the bush there enters the terror factor. When you got to the point where weather conditions, ice conditions, rough engine or whatever, more and more of your attention was demanded and pretty soon, you hardly saw anything to record in the records.

King: There is a fatigue factor too.

Evans: Oh, I think so too but I don't think that begins to compare to the terror factor.

King: Those must have been interesting times, those first few years in the Prairies.

Evans: They were.

King: Say a few more things about Johnny Lynch. I remember his essay called "*Escape from Mediocrity*." Do you remember that one? It was sort of a rambling, humorous, account of flyway biologists assessing birds in the Prairies.

Evans: I don't know whether I ever saw that. He had a heart of an innovator. I didn't always agree with what he came up with but he had ideas. He used to think that you could probably determine the strength of the breeding seasons by the number of water areas just as well as by counting ducks. He may have been right considering the relative lack of precision that we had counting ducks. We spent quite a bit of time counting water areas. One spring season, Johnny had for some reason, been grounded and I had nothing to do and I flew him over the Prairies and he spent about 100 hours, at roughly 3,000 feet, just counting water areas then mapping the terrain through Saskatchewan and on into

Alberta. He was trying to devise a scheme for determining the strength of a _____. I expect, especially as you get into the dryer parts of the Prairies, this may be an important factor. That country could get totally dry and there would be absolutely no ducks or it could be very, very wet and you would have ducks coming out of every crevasse.

King: I always thought his "*Escape from Mediocrity*" article was interesting. That's exactly what he was talking about. He would talk about a red light, a green light, or an amber light. Most years were amber for hunting but periodically things would dry up so badly that you would get a red light and occasionally, you would have a lot of water and it would go green. He wrote this up in a kind of a facetious way and I know when they were doing the book "*Flyways*," Bruce Conant and I sent a copy into Ross Hansen and suggested that it ought to be in that book but they wouldn't put it in. It wasn't serious enough but a few years later, Hugh Boyd, after Johnny died, submitted it to "*Wildfowl*" and they thought it was great and they printed it.

Evans: One thing about Johnny, he had sort of a facetious air to him and lots of people tended to downgrade his thinking because of his comical expressions. I know Art Hawkins was affected that way some. I don't think it was a good idea to downgrade Johnny's thinking.

King: That was a pretty classic paper. This side of the tape is about to wind down, let's turn it over and get you to Alaska!

Evans: I just realized that I've not said anything at about Ken Black. Ken worked with me in 1951 and 1952.

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((beginning of Side B, Tape #1))

For some reason or another, we were able to work very well together. We just happened to have good fortune in the number of people who came up to look over what we were doing an _____ was one and he was probably the most influential person that I can think of but several more came from the Washington Office. Ken was able to relate to these people better than I was and I remember him saying just a year or so ago that really the things that happened out there were the things that made his career. There was somebody up visiting when we beat out a brood of bright green teal and what an impression that made on the visitor! Ken was a pretty good politician, and I don't mean that in an adverse sense. He could relate to those people and get a message out. He thought that got his career off to a start. He did have a very good career. He wound up as a Regional Director and he did a good job. He was a good person to be working with. We went out and reviewed that whole Prairie Pothole Project about three years ago.

King: Let's get to Alaska!

Evans: Eventually, the opportunity arose to take a job in Alaska that required flying and I think I was only one of two people in the Washington Office who had flight authority from the Fish and Wildlife Service and the other person didn't want the job. I applied for the job and eventually got it. I can remember Clark Salyer – Clark, Mr. Salyer, quite often saw things out of different eyes, but I had a lot of respect for him. I think he had some respect for me. I felt very strongly about him being kind of pushed off in a corner after he went blind. I thought he was getting a raw deal. I remember he could tell when you were coming down the hall and he asked me, “did you get the job?” and I said, “bush.” He laughed. He had a sense of humor right up to the very end of the time that I knew him.

I got to take the family and go up to Anchorage and I stayed in Anchorage all the time that I was there. That was December 1961. Jack Lentfer was in my office which was the making of my career because Jack knew the country and he knew the ropes and he was a hell of a fine person to work with. Of course, there was nothing like having an office in the back end of a hangar with just about any kind of aircraft you could ever want to get

your hands on, except Harry Reitz wouldn't let us fly the Goose for a long time. He was pretty nervous about that. He was a little nervous about the aviation business altogether. At any rate, we had a good setup there.

What I went up for, primarily, was the Rampart Dam proposal and that was a very interesting project and it kept us busy for a number of years. It was a proposal to dam the Yukon River at Rampart and to flood the area the size of Lake Erie. It would have a tremendous affect on major waterfowl populations in interior Alaska. That finally died for lack of a market for the power rather than our successful arguing that it was too costly in terms of waterfowl. Now, of course, the land is Native owned but I think it is probably pretty safe from impoundment. We had lots of other programs going. This was the Office of River Basin Studies.

King: Talk a little more about Rampart and moving up there for several seasons.

Evans: We only moved the family up there the first year. It looked as though I was going to be working out of Fort Yukon, so I thought why not take the family. So they got in the Volkswagen bus, three kids, and my wife, Maggie, with a whole pot full of canned goods and the things they thought they would need and they drove up to Circle. I got hold of Homer Jewell to fly them down from Circle to Fort Yukon. Since he had a Comanche, it would take a couple of runs; how could you get into trouble between Circle and Fort Yukon. Little did I know, Jewell put his fuel in with a medicine dropper, headed up to Circle and loaded up the kids, Maggie, all the canned goods and everything else they would need and fired up his Comanche and staggered the strip at Circle and staggered into Fort Yukon on the fumes. Nothing happened, but the kids could all say they rode with Jewell to the _____.

King: We used to call him "walking Jewell" because he walked back from so many accidents.

Evans: One of the main things that we did was waterfowl surveys. We contracted with Cal Lensink to do waterfowl evaluations. We started out with a notion that we would fly aerial surveys and check them with ground truthing, by means of ground truthing through ground surveys. Jack Lentfer and I flew transects across the flats and Cal, and usually Jay Eisenhart, a Cornell graduate (half-grown native, a very excellent worker), he and Cal would take off in rat canoes. I would carry them in in the morning to wherever they were going to work, drop them off then Jack and I would fly transects, then pick them up after the day's work was over. Then we'd pick up Jay and Cal and fly them back to Fort Yukon. Finally, we realized that was no way to do, why don't we just go back to Fort Yukon and gas during the day then Cal and Jay can stay out and we can stay there with them and we can camp out on the flats. This is what we did from then on. It worked very fine. We got our meals and our gas. We did that for two years. Finally, after talking with Cal that perhaps what we had was a pretty good indication of the waterfowl density through the ground surveys and we weren't really adding much by doing the air surveys. We did a lot of work on the ground.

Then there were the fisheries surveys. We did quite a lot with resident fish in the ponds in the flats. We had students up from the States. One of them was John Barley(??) He was one of our better ones. Steve Tack was another student, and Jake Christopherson(??) John Barley, particularly outstanding, was in charge of research at Yellowstone Park for a number of years. I met him a few years back when I was out there. He is still doing fine. I don't agree with him on some of his principles of Yellowstone but that's minor. He is still a good man. We had a lot of good people working with us. I still have contact with one of the crews on Copper River. That crew hung together since 1967, or 1966. I only have contact with one but he told me about what the others are doing. Jim Seidl was another one. He was the supervisor of the Copper River crew but I did all the flying; carried them their groceries, etc. That was a closely-knit operation. The Copper River project was to try and determine what the affects on salmon would be from an 1100-foot dam on the Copper River. The Copper River system is a highly productive sockeye salmon stream. We did that through _____ of the adult fish from the trap and recapture program; capturing the fish and recapturing them as they went up stream past

the dam site. Through a little monkeyshine with mathematics, we could do some estimates of the numbers going past the dam site. Then the different runs were identified through serological analysis at the University of Washington. We would take samples and fly them out from Cordova. They were never able to determine precisely which runs these fish came from. They were able to determine whether or not they came from above the dam site or below the dam site. We had a lot of fun with that. That was a very interesting project because the river itself was a real challenge. When we started that thing, we were unable to determine whether or not it was navigable. We finally ran into VanDerGast(??) who had run the thing himself. We figured we would take the Susitna riverboats which had been developed to cross the Cook Inlet and go up the Susitna River so they were both sea worthy and also fairly decent riverboats. We used them on the Copper and they were perfect. We never had an accident. We used two engines; one to push the boat and the other one to be there to get a person out of trouble if the primary engine quit.

King: Was VanDerGast(??) the guy that sunk Pete Shepherd's equipment?

Evans: I don't know whether he was or not. Actually, we were lax in our research because the riverboats, or stern wheelers, had actually run the Copper up as far as Chitna so they had run through Wood Canyon in the early days before the railroad. We didn't know that. We didn't know it until we saw some photographs of those boats at Chitna. We never had a real problem with the river. It was sometimes fun getting things through there. We towed semi-constructed fish wheels through the canyon. Jim Seidl and I towed the fish wheels down the river early one morning before the winds came up. We had a big problem in the summertime towing them down the river if we waited too late in the day because the wind would be strong enough to take a lightly laden boat and pitch it over on its back. Very strong winds went through that canyon, downhill in the winter and uphill in the summer, along with dust. It was a beautiful piece of country, just spectacular.

King: Back at Fort Yukon, how was it to live and work there in that community with the family? The Flats now is largely a refuge but none of the refuge people live there.

Evans: I suppose we missed a little bit by spending so many nights out of Fort Yukon. We had a "Game Commission Cabin" and I guess it was built during the days of the Alaska Game Commission. It was where Cal Lensink set up his housekeeping right in the middle of town - Fort Yukon. It was a little log cabin, nothing fancy. It had a radio, no running water, one bare light bulb. Then there was the place where people met when they came in to the village. When my family came up, we rented a cabin a little ways on the outskirts of the village. It was different for someone who had never lived in the bush at all. I remember Maggie having some trouble. At first we had trouble buying fish because the Natives felt that something would happen to them if they sold fish to us; it might be something illegal about it. Eventually, she was able to buy a few jack salmon then she would go down to the river and try to dress them out. She finally attracted the attention of some of the Natives and they laughed at first and then they took pity on her and showed her how to do it. Something that I probably should have been doing! She was impressed by the fact that we would take the old '49 Dodge pickup truck up to the radar site and get water in blazo cans, (gasoline 5-gallon tins). We would fill those up and bring them back to the field crews, some for ourselves at the cabin and then the water was used several times over for dishes. When we got through with the dishes, then you put it in the biffy. Seems as though you could make five gallons last about a week. You don't use a lot of water under those circumstances. Then we would take our baths in Hospital Lake, which was a lake adjacent to the runway. Most of the year it was o.k. to go in except for the time when the _____ itch was rampant when the snails were out. Then we had to do without our bath. That was also the place we kept our floatplanes. Every thing that went out of Fort Yukon that was biological work was generally on floats. One of the main projects on the Yukon was the appraisal of the salmon run. For that we contracted with Howard Sears from the Auke Bay Lab who had experience devising fish wheels that would catch fish and tag them and he made estimates of runs, particularly the king salmon. He also got a few coho's and then there

were also chum (dog) salmon. King salmon were the primary fish. I have been away from Alaska so long, I call them "Chinook."

We did work on the Rampart Dam Project for quite awhile, downstream affects, among other things, worked on the fisheries and the tributary streams, the Hodsana(??) in particular. One of the interesting experiences I had on the river was when Starker Leopold and Lee Ebberhart came up. I was assigned to show them the project. We had a nice trip. It took three-four days cruising around the river showing them what had been going on. I had a real shocker when we got to the Rampart site. The Corps of Engineers had set up a camp there. Howard Sears thought it would be efficient to take over their camp and use it and then after Howard was through, the _____ came along over both camps and we didn't have money enough to clean it up. Starker spotted that and wanted me to take him over to take a look at it. I didn't have much choice. It was a little embarrassing. Finally, we did get some money and we did get it cleaned up. We had a trip all the way down the river. It was good to see the habitat with these people because you got different viewpoints. Starker had a lot of ideas of his own. He thinks he got a lot out of the trip. I know I got a lot out of taking him along.

I also had another very interesting person. One of the resources we analyzed was the prospect for a fresh water fishery in the proposed _____. Several of our people went over to look at Great Bear Lake and came up with some pretty enthusiastic ideas of what happened in the impoundment in terms of commercial fresh water fish. This fellow from Sweden came over, can't think of his name, he was in charge of their hydroelectric system and the biological cradle(?) I spent a couple of days with him and we looked over the impoundment. I bounced these ideas off of him. He was actually under contract to River Basin Studies to report on this. He came up with some pretty gloomy ideas relative to the fisheries, particularly in terms of _____ of old stumps and what they would do and more of water level fluctuations. He raised a number of questions that I don't think we were at all prepared to answer. He never submitted the report so the only information we had from him was hearsay through me. I don't think I was very convincing.

We had the moose surveys which were lots of fun. We did want to know about wildlife. This was one of my early go-rounds in February and March of '62. We got a bunch of people from River Basin Studies and several others. I remember Ave Thayer was on it and we stayed at Triple Hot Springs and we went out every morning and worked quadrant surveys for moose. We had a statistician come up and he did a day-to-day analysis to see where we needed to put in more effort. We spent about ten days on that. I can't say how many moose we estimated there were but quite a few. The interior basin was wonderful habitat – sun bowls.

One of the very interesting projects I had was to, Hank Hansen, Dave Spencer, Fran Mueller (aquatic biologist from Patuxent) Cal Lensink – we had three-four airplanes and we were surveying these various sun bowls, looking for possibilities for litigation of losses from Rampart. John VanderNacker from Portland was up as an engineer. He would appraise what it would take to build a dam and create an impoundment, improve waterfowl in the Koyukuk Basin or in the Hosiana, or the Tanana, or some of the smaller tributaries. When we got through, Dave Spencer and I were absolutely horrified because this would mean the total destruction of all these sun bowls; some of the very best habitat in interior Alaska devoted to cranking out ducks and we just couldn't see it. We submitted a report but fortunately one of our people in Washington said, "oh, it's too expensive, it won't fly."

King: What were you thinking about – making additional impoundments?

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((Start of side #2))

Evans: One of the stories, my wife should be telling, results from having occasion once in awhile to take one of the boys along with us. I did say "boys" and it's true, our daughter

was not taken on these trips and she has given me hell for it ever since. It was a “man’s world” in those days and it wasn’t until quite a bit later that women started showing up in the field. I took Paul out one time to pick up Cal Lensink and Jay Eisenhower. They had been left out at Canvasback Lake, not far from Fort Yukon and I told Maggie that we would be back in a short time. As I left the shore at Fort Yukon I could feel this little bump on the airplane and I didn’t think much of it. We put down and waited for Cal and Jay to show up with their rat canoes. Eventually they showed and we loaded the rat canoes and Cal and Jay got into the airplane. We started to go and I couldn’t get up on the step. The main compartment of one float was full of water. I figured I’d better plunk it on the shore somewhere so I picked the nearest shore. It turned out to be a little island in Canvasback Lake. I think if I hadn’t had a fiberglass boat kit aboard I would have been out of there a lot faster but I thought we would just jack it up out of the water and put the patch on and then it would heal. I called Fort Yukon and I thought I was getting a response. I’d call and I would get a bunch of hash on the radio. I figured it was somebody answering. I found out later, it wasn’t. Nobody knew where we were. Anyway, we cut a bunch of spruce poles, jacked up the float out of the water and put a patch on. We sat up a tent so Paul could go to sleep but of course he didn’t. There were nesting terns all over the island and he had a wonderful time being bombarded by those terns. Cal built a fire and we had some soup and we told stories. Paul, who was then four, would play with the terns while waiting for the fiberglass to harden. Of course it didn’t harden, being that close to the water. Dawn came, actually the sun started to rise, and we could hear two airplanes coming in. Low and behold, there was Keith Herrington from Wein Bush Air Service and the famous Jewells _____ with another Cessna. They came in to rescue us. They got a bowl of soup too, and we told a few more stories. Eventually, the patch job was hard enough to give it a try. We loaded up and off we went back to Fort Yukon. I later took the airplane in to Anchorage to get it repaired but that was a tremendously exciting night for Maggie who had no idea where we were. She went to try and get some help from the FAA and the operator there was totally stoned and useless for anything. It wasn’t until she got hold of Keith Herrington that she was able to get any help at all. She spent a pretty worried night. We weren’t worried, we were having fun.

Another time we helped, in the late summer, round up diving ducks off Dick Lake. You (Jim King) built a tremendous trap. There was a fair number of boats and airplanes involved in driving these ducks. I think there were perhaps three or four Cessna's and a number of canoes and I took out Richard and Paul. It was a long day. We taxied back and fourth on that lake for roughly ten hours. During most of that period it was dull as mashed potatoes for the kids. They did have books to read. Then they began to catch sight of the birds; thousands, and thousands, and thousands of ducks. Then they got excited. By that time the airplanes and the boats were all getting closer together and it was an awful lot of action and they were just mesmerized by the whole thing. We caught an awful lot of ducks. I think there were more than 30,000 in that one drive. It was a success.

King: An interesting side note on that was we caught a lot of horned grebes on some of those drives. I had been doing that for several years and I got kind of scolded by Patuxent for wasting bands on a project that didn't have some good rationale and scientific program or something. That was when they were maintaining their files and file folders in the banding lab. I thought if we caught all these grebes we ought to go ahead and band them. We were up there to band things and nobody might ever be doing that again. This winter, 1998, I got a letter from a Ph.D. student in British Columbia who is looking up all the records of those grebes that we banded, 35 years later! I thought that was really neat. I had forgotten all about the red-eyed wrigglers. I'm going to look up some notes on that for her.

Evans: I would probably be hesitant in spending a lot of money to catch the grebes but once they are in your hand, it's nothing to put a band on.

King: Well, it is something, they peck! I know a lot of the guys didn't like to handle them but it was worth it, apparently.

Evans: I know how Patuxent feels too. I remember down in Illinois, a fellow there was very good at handling geese. He was an expert at trapping, raising feed for them, managing them in general. He started to over load the Patuxent Office with band records with very little rationale. Most of the geese were trapped from one segment of the Horseshoe Lake Refuge in Illinois and those bandings were supposed to represent the goose distribution throughout the flyway. Most of the band recoveries came from Quebec. The assumption was that Quebec produced geese only for the _____. I think the upshot of that was that the Horseshoe Lake geese and Quebec geese were one and the same. Nobody ever trapped geese sitting on any other portion of the Horseshoe Lake Refuge, even though George Arthur would tell me that 15,000 geese would come in and they would sit on the west side of the refuge and then another 10,000 would come in and they would sit over on the east side, and then 5,000 would come in and would sit where we trapped geese. I then began to wonder what these tens of thousands here and fifteen thousand there might represent birds from various portions of their breeding grounds. They weren't randomly distributed. If you took birds from one breeding ground, they might not be randomly distributed over a portion of the refuge. So, perhaps we were obtaining a very bias sample. We never checked that.

King: I think Harold Hansen has those divided into about 30 subspecies. His book is about to come out after all these years. Harvey Nelson thinks it is going to stimulate a lot of new thinking and arguing, no doubt.

Evans: That's good, because I don't think we had very many answers in those days. Another thing I got involved in up there was the trans-Alaska pipeline. It was well on its way toward development when I was still with the Fish and Wildlife Service. One of my major projects was being liaison with the trans-Alaska pipeline system (TAPS). I was involved in keeping track of what the pipeline was like, where it was going to go and what habitats it would affect then trying to organize surveys in the areas that were important. After a year or so of this, we grew a little and the Service established a "pipeline group" within River Basin Studies. LeRoy Sowl, Don Orcutt, and I had an election to see who would be the supervisor. LeRoy wanted to be supervisor so he voted

for himself and neither Don Orcutt nor I wanted to be supervisor so we voted for one or the other and then, of course, LeRoy won. He was a tremendous supervisor. He really had a strong sense of responsibility; energetic and very knowledgeable. He didn't come with a red-hot reputation but as far as I was concerned, he was one of the very best. We determined that the major impact of the pipeline activities would be in the Arctic on the coastal plain and in the Arctic waters. Then, equal to that would be the Prince William Sound where the oil would be trans-shipped and right on down the coast from Alaska to British Columbia to wherever it wound up. We were officially told that it wasn't going to go to Japan but we knew better. We knew it was going to go to Japan. For some reason, they felt they had to deny it. We had some pretty good activities going. I got checked out in the Goose and between the Goose and the Super Cub or Beaver, we did rather intricate surveys in Prince William Sound trying to establish a density of waterfowl and various birds and mammals, actually animals in Prince William Sound and various tributaries. We probably spent about 75 hours in each of four seasons - spring, summer, fall, and winter doing appraisals of the tributary areas. Larry Haddock flew the Super Cub or Beaver and we'd play longitudinal transects with the Grumman.

Then we had occasional ground checks with Pete Islieb's skiff. Pete was a real fine, probably one of the world's foremost observer of birds. He didn't have a cast iron stomach. He would sit in the back end of a Super Cub and be sick for hour on end but still counting them off, just as nimbly as ever. He also had a skiff that he used for fishing and we used that for surface surveys.

King: Seine boat?

Evans: We started off with Jerry Thorne's seine boat. The seine boat was so slow that you had to be very, almost timid where you took it. Pete's boat was fast enough even though it wasn't as weatherly as the seine boat but he could take it out across the Sound in any kind of reasonably decent weather and if the weather started to blow up, he could get out of there in a hurry. His skiff worked fine. This was the same boat he used on the bars. Jerry Thorne's boat was the "*Northwind*." It was a nice boat but just couldn't do

quite the job for us. That was a very interesting survey. One of the most interesting things about it, a silly coincidence, was one evening LeRoy and Pete went out to the flats outside of Cordova and started looking at shorebirds and they spent several hours out there. They finally, just for fun, came up with an estimate that there were 5,000,000 shorebirds on the flats. The next day, we flew the flats with the Grumman. We flew very few miles and took a very small sample but we inflated the sample, and low and behold, there were 5,000,000 shorebirds! Figures do lie, I didn't believe either of those. That was what I was doing when I received a call that no one had done the Fish and Wildlife appraisal of the affects of alternative routes. They had been talking about an alternative pipeline route down through Canada. In the knick of time, someone caught it and they called me and I had a month to do it. I called all the people along the way that I thought might have personal information. I just started a trip around the countryside with those people and was able to come up with enough of "down home" information to do a report that met the needs of the system within the month. I got it written and off. I wasn't too happy about it.

King: Before you get clear away from Prince William Sound, I think those baseline studies and the numbers you came up with became tremendously valuable as soon as there was an accident. When the *Exxon Valdez* dumped its oil, people immediately began to ask what was there.

Evans: Yes. Larry Haddock was leading the survey pattern and analysis. He was lost just at the time the thing was being put together. He (Larry) and two other men, Bob Bergman and Leonard Boughton who had been working on the Arctic were lost in an amphibian somewhere in the Gulf of Alaska. So nobody actually wrote up the surveys that we had done in Prince William Sound. They tried to get Pete Islieb to do it but Pete didn't have that much of a head for manipulation of numbers. He was a very good estimator of numbers and they didn't want to pay him high salary to do it. I might not have done a very good job either but I'm sure I could have done more than was ever done with it. Somebody eventually did a publication that did nothing but enumerate the species we saw in the numbers within those species. That didn't seem to be very useful.

When the seabird conference took place in Seattle, I tried to find out from the Alaska people if anyone was getting that old data out. I think they believed they were but I don't believe they actually were. I don't think anything has been done with that and if the maps have been lost, it is going to be very difficult because, first of all, I couldn't reproduce our transects. We ran them _____ ways in order to cut across the grain of the country. The surveys that Larry and Pete ran with the Super Cub and Beaver were rather precisely delineated and without those maps, I don't what we could do.

King: This spring of 1999, there is a 10-year anniversary conference on the Exxon oil spill. All the investigators that have been trying to determine what the damage was will be reporting on this thing so it will probably come out how much of that work turned out to be useful to the current crowd.

Evans: I just can't imagine how any of it could be. I would like to think that somebody has been able to get all the maps and the data and put it together. I think all the data should be there somewhere. Some agencies think that after something is ten years old, it's too old to worry about, so they just throw it out. I don't know if the Fish and Wildlife Service does that or not. Well, maybe what we have to say is that we had a lot of fun doing it and we learned a little something about how to do these things but I don't know how useful that is. One thing we learned was that the Goose was a very good airplane for surveys as long as the pilot was also the observer. It's no damn good at all if both observers don't sit in the front seat.

King: I think there were other reproductions. There were shorebird studies that followed. So that initial look there was no data for much of anything for that whole area until you guys were looking around and people began talking about it and especially the shorebird. Nobody had thought about that at all until you brought it up.

Evans: That is one part of the international shorebird's critical area.

King: Yes, I think that had a lot to do with it because it was Stan Sinner(??) that did his graduate work there and then got involved with the International thing later. It may not have been finished work but it started things.

Evans: I think we may have done just about the same in the Arctic. We did aerial surveys of birds on the Arctic coastal plain. We used a Cessna and a helicopter. Larry Haddock rode in the helicopter and did his counts and I carried various people in the Cessna and we made estimates in the western portion.

((end of Side #3))

((beginning of Side #4))

I think our general overall surveys of the Arctic did give a fairly good picture of the distribution of birds in the areas that would be involved in the oil production. We had a program on two different levels. We had a couple of graduate students working west of Prudhoe Bay along the coast doing detailed studies of the reproduction and behavior of birds in the Arctic coastal plain. Bob Bergman, Bob Bartles, and Leonard Boughton were very good people. Of course, Bob Bergman was lost along with Larry Haddock and Leonard Boughton in the Gulf of Alaska. They spent two years doing detailed studies of ecology in the wetlands in the Arctic. I think they provided some pretty useful data. They came up with a good publication. "*Shorebirds and their Habitats*" I think was the name of the publication.

I got to play with Jack Lentfer and his polar bears. We went up in the spring and stayed at Aliktok at the Dew-line station and flew the coastal plain hunting for polar bear nests. Female pregnant polar bears will go to dens in the fall, give birth in the den, and then sometimes in April, usually, they will emerge from the den. They spend about a week around the area and then go to sea. Jack wanted to learn more about their denning behavior, distribution of dens, and the general abundance so we would crawl around the coastal areas looking for the exit hole that the female makes when she comes out of the

den. It is a round hole and shows up fairly clearly. If you happen to see one you can't mistake it for anything else. We would go down and try and determine if the female and her cubs had gone to the sea and if she had, we would go in and excavate the den and study the general composition and shape, etc. We were usually pretty good, of course nobody's perfect. One time we dug down into the tunnel that leads to the den from the exit hole and Jack was going in headfirst, slithering down into the tunnel and all of a sudden, he backed up. I don't know how he managed to back up, jet propulsion of some kind! Very quietly, he reached down, picked up his toolbox, his rifle, and turned to me and said, "she sighed!" She was still in there; not much aroused but just enough to sigh. I don't remember how many dens we found. It was a fair number.

We also found a strange sight out on the ice about 100 miles northeast of Barrow. We found a bunch of fox tracks out on the ice; just great gobs of tracks and finally we discovered a little oblong hole through the snow in the middle of this dancing ground. We got curious and landed and started digging into this hole. We dug it out and low and behold, we eventually got down to a seal den. There was a little bit of blood there. There was a shelf just above the water and a bit of open chamber around that and then snow above that. The foxes had dug down through the snow to the chamber and from the blood on the ice, we figured they had taken the seal pup but there wasn't a piece of hair, or hide, or anything anywhere in the area. It was just amazing the extent to which they cleaned up every scrap.

King: What kind of plane were you flying then?

Evans: Either a 180 or 185 on skis. I preferred the 185 when I could get it. In 1972, after I got through with the pipeline business, I wound up with a planning group consisting mainly of the Bureau of Land Management. Gordon Watson who was the Fish and Wildlife Regional Director in Alaska, put me into the planning group to protect me from a reduction-in-force (RIF) that he foresaw coming down the road. After a few weeks, I decided to walk across the street and talked to Dave Hickok who was the Director of Sea Grant. I had the feeling that the Fish and Wildlife Service was being badly battered in

this whole interaction between agencies and the Pipeline Study Group, etc. He thought, first of all, I was complaining about my own situation. I finally convinced him that I wasn't. I knew he had connections in Congress and perhaps he could at least let them know that things were not as some of us thought they ought to be. Then he finally said, "Chuck, there is always a job over here if you want it." I told him that I would need a little time to think about it. About the time I got back across the street, I called him back and told him that I would take the job! I discovered later that I had broken the law in the fact that I accepted for the same day, payment from two agencies. I suppose I should pay it back but I don't think I will unless somebody comes after me. Somebody asked what I did with Sea Grant and somebody else answered, "oh, he does the same thing he always used to do except he just gets paid out of a different pocket." That was pretty much true for awhile. If we wanted to use an airplane, we just went over to the Fish and Wildlife Service and rented one of their airplanes. Theron Smith put me on as a temporary pilot. The formation of the Office of the Aircraft Services made that more difficult.

I continued working with Jack Lentfer on the polar bears. We did a lot of other interesting things. Dave Hickok was involved with several regional corporations and village corporations in planning for the Native Land Claims Settlement Act, on selecting their lands. This was kind of up my alley. I felt more of a generalist than a specialist. I had been around long enough to have some general ideas on a lot of different places and a lot of different resources. I had a sort of an affinity for the Natives and their problems in this thing. I don't know if we helped them very much but we did our best. What we tried to do was not to tell them anything but to teach them what questions to ask themselves; questions to which they could provide their own answers. For instance, where did they gather the resources they used, and to what extent did they use them. I know we learned a lot by working with them. One of the things that really impressed me was the meeting we held where three elders from each village met several days mapping their land use. When we got through with the maps, there was hardly a spot in Arctic Alaska that was not used for one thing or another to provide them with their subsistence resources. It was an interesting experience for me. I hope that we did a little something for them. It was a terribly difficult problem. It became clear that some of the people with

a little more nimble language, had more control over their selections than some of the older people who might have had a little more experience. It was an unusual experience that I'm glad to have had.

We continued doing some biological work there too. Dave Hickok gave up a Sea Grant Program to _____ then they became the Arctic Environmental Information and Data Center (AEIDC). We were an interdisciplinary group. Dave was a pretty fair administrator. Lydia Selkregg was a geologist and planner and an expert at organizing and getting money from the Legislature by coming up with programs that she convinced them they needed. The first job we did when I joined them (still Sea Grant) was we did an environmental study of the Greater Anchorage Borough based on work that had already been done. The Corps of Engineers had done a tremendous number of studies after the Alaska earthquake. We used that information, put it together with very fine graphics and put together a publication. I think it is the best one we ever put out. Then we put out seven regional profiles of Alaska. We took the State of Alaska and divided it up into the various Native Regional Corporation regions and did environmental, social, and economic profiles of those regions. We had a team that was able to work pretty well together. Here it is now 20 years old, not very complete when we did it, sort of a preliminary go-round. We should have given it one more review before it was published but still, that's all there is. Part of that is a result that the graphics people did – a great collection of maps and some good illustrative graphics and photographs.

King: As I recall, you provided lots of photographs, both from the Rampart Studies and I don't know how many more but you always had quite modest equipment to do that with.

Evans: Starting off with the flyways in the Lower 48, I used modest camera gear but I became interested in aerial photography and found out that everybody else took color pictures and if somebody goes out and takes black and white, you can come up with a print that was a lot better than anything you could make by converting a color

photograph. I did some work in the Lower 48 with estimates of large flocks of birds so I got myself a

K-20, aerial mapping camera. That meant that I had to process my own film. The K-20 is not the end of all aerial cameras but when I went to Alaska I was able to get a 6x7 press camera. When I went to the Sea Grant Program, I also got a different one so I always had a good black and white camera and then I had my own camera that I could take color photos with. My main justification was if you have an airplane going around the country looking at all these amazing sights, there was always one who was always in it and that someone was "me." I might as well be taking photographs. Gene Kotay(?) who was head of the graphics section at AEIDC took issue with that. He thought I should carry a professional photographer along. To some extent, I could agree because when Gene went out, he came up with better pictures than I could take. He just had an eye for it. He was an artist. On the other hand, he didn't go out very often, so if you wanted a photograph, it had to come from the people who were on the scene to take it. I think we got a lot of photographs that we wouldn't have gotten otherwise.

King: I remember a series of your photographs on the walls in the AEIDC.

Evans: Yes. A lot of photos got lost at AEIDC. I picked that problem the hardest with Dave Hickok. He didn't understand that photographs were data. Photographs did not become data until they were labeled so that you could determine identification. After I would get a proof sheet back, I would carefully label each exposure on that sheet. Then it would go to our photo lab and the lab would make a print and would not label it so off it would go into some project and become lost to the point where you couldn't get a label on it. I was unable to get through that. I couldn't get Dave concerned about that at all. He spent quite a bit of money and time getting a good photographer over from Germany to do a project photographing the Arctic and he did a good job. He took a lot of good photographs, none of them got labeled, so we forgot who they were, where they were, what they were suppose to show, etc. When we went to do these profiles, they were utterly useless! I could never convince Dave that this was essential. I don't think the AEIDC exists anymore.

Dave Hickok is still in Anchorage and is still a force in the area. I think he is tired and I keep in touch with him a little but mostly I keep in touch with Dave Spencer. He is not well, you know. Did you hear about his canoe? He decided he would try his hand at building a cedar strip canoe but he didn't think he could get it finished before he passed on but he thought he would go ahead and do what he could. Last summer (1998) he took a trip in it! He got it finished and is using it. One time about two years ago, he was on a trip down on the Kenai and he became quite ill and he realized that the only thing that would really settle his insides was a jolt of rum but he didn't have any. He got in touch with Bill and he flew down to the Kenai with Dave's "fix."

There are some interesting entertaining things that show up flying airplanes around Alaska. I got in a fix one time in Bee Canyon(?). We were doing rough estimates of moose populations of Bee Canyon. It was a long-standing proposal to build a dam in there. I needed to make a landing somewhere so I thought there was an old strip down there in the Bee Canyon. I landed and the last 50-feet or so it got colder and the wind blew stronger and I thought I'd better take off. The skis wouldn't slide. The snow was too cold for sliding. The granules of snow wouldn't melt. I even got out and pushed and I couldn't make it go. Eventually the thing iced up and quit. There I was, about 45 below zero with roughly 40-knot winds. I figured I was going to have to spend the night so I gathered up a bunch of spruce boughs and set up the engine cover over the engine. I dug a trench and I was going to put the spruce boughs and snow over the trench. Well, the snow was like sand. It wouldn't pack on the boughs so it just sifted through. I finally found slabs and got the trench covered so I could slide down in the trench with the sleeping bag and inside the engine cover and stay out of the main portion of the wind. I had a rather long night. In the morning, I reached for the coffee canteen and I was going to have a little bit of coffee and the thermos was frozen. Fortunately, I was by myself. I think if there had been more people we would have had real problems. I grabbed the container for my gasoline stove and frostbit my fingers. I figured I would try and crank the airplane up in the morning so I got the little stove going to preheat the engine. It wasn't one of the firepots that we always carried that really heats up an engine in a hurry.

But I thought, given enough time, this one would work. The weather had warmed up to about 20 below which was warm enough so you could operate. Just about the time that I thought it was time to start cranking up the engine, along came a Cessna banging along on the ice, which I had not used to land on. I had landed in the snow. Jerry Lawhorn and Smitty were there and they had a real firepot and it didn't take 20 minutes to get the engine warmed up to where I could start it. The snow was warm enough so the skis would slide so we didn't have anymore problems. I learned a few things from Jerry on that. I think we all learned some things from Jerry. He said, "if you ever run into this situation, don't try and idle the engine, cut it down, because idling is what makes it ice up."

((end of side #4))

((start of side #5))

When I got back into town, I went to see Dr. Mills, the "oracle of frostbite." He welcomed any case of frostbite that you could bring him. There I was. I was supposed to be home for dinner because we had company coming. I wrote up the problems that I had with all the inadequate gear I had along. I got authorization to buy a pretty good kit for carrying around in the bush in the wintertime. People built on that and I think we learned quite a bit from that.

I was bringing a Beaver down from Fort Yukon to Fairbanks for Ave Thayer and then he had an airplane that needed to go to Anchorage, so Ray Morris and I took the Cessna to Anchorage. It was a fair afternoon. We came down through Windy Pass, started down the Chulitna and the weather started to close in. We skirted along the side of the river. I figured I could see the difference between the river flats and the hills along side. Eventually I came to the point where I couldn't be absolutely certain whether I was looking at a windswept hillside or a slough along side the river and I decided enough of this! I circled around and pumped the skis down and called Talkeetna Radio. They assured me that Talkeetna was good but the weather between where we were and

Talkeetna wasn't good and so we stayed put for the night. That was really quite a decent place. I noticed Ray was looking a little nervous and I couldn't much blame him. He mentioned when we got down that that happened to him once before. I asked him how did it come out and he said, "oh, we crashed." We had a fairly comfortable night. We had everything that we needed, a small tent to set up, no wind, and generally peaceful. It was a bit different between thrashing around in the air wondering exactly where you are and getting down and seeing that really the weather was peaceful. The snow was falling gently through the air and the temperature was 20 degrees above zero. The next morning the snow was gone, a few broken clouds, and away we headed for home. One of the advantages we had with Fish and Wildlife Service airplanes was, even if you pushed the weather a little bit, you always had the kind of gear that would give you an out. If you were on skis, you didn't need very fancy runways to land on; if you were on big wheels, you could find gravel bars; if you were on floats, you could find a river or lake to land in. In most modern airplanes, you are limited to landing on runways. If you push the weather and can't get through, then you either have to turn around or crash! We were spared that decision and we could get by with murder as it were, as long as we didn't push it too far.

King: Do you want to make any comments about that trip to Arizona? What I remember about that was you and I sharing a room in the motel and it got colder and colder in that room in Arizona. Finally we were in there one morning when the maid came in and she said, "when are you going to turn that air conditioning off?" It was snowing outside!

Evans: It was interesting. I got to see a little of the country which I had not seen. I had never been in the southwestern desert before. We had a good time going up Mt. Lemon. I remember being amazed and how amazed the people were to see snow.

I remember picking up a piece of cactus that was just ideally suitable as a walking stick. You made me put it back.

What amazed me was sometimes when everyone else was gone and nobody was left but you, Smitty, Jerry, Marion(?) and me, we discovered that we grew up within probably three miles of each other, had gone to the same grade school, Hession Hills(??) and our fathers taught history in New York City, one in Columbia and one in NYU. Strange coincidence, coming down from Alaska, meeting in Tucson and finding out all this. I took a trip to the Grand Canyon in 1967 with the University Class of Western Washington and I was given the assignment of appraising the affects of aerial over flights. I used the photograph that I took when we went through there on our return trip from Arizona.

We got to Salt Lake but didn't do much there. Our most interesting stop was at Northway. It was too cold and stormy to fly. We had our planes in the hangar and the guy who was in charge of the place worked in the hangar all day and wound up with headaches at night. Then we finally got to go on a very cold day. It was 40 degrees below zero. Our radios weren't working. We thought we would climb up and try to hit an aversion to some warmer air. We started up and didn't get very far before I realized my carbon monoxide indicator was gray and that didn't look a bit good. About the only thing we could do was aerate the airplane! We opened up all the windows and we just about froze, flying all the way into Anchorage like that. If our radios had been working, we could have called each other and we would have discovered that it was the furnace in that hangar that had caused the problem, not our airplanes! One of the things I miss about modern aviation is, you don't get weathered in.

King: I remember one of the things that was nice about that trip was that here we were flying two DeHaviland Beavers, traveling together. Most of the airports that we stopped at, two DeHaviland Beavers were of interest to people. The tower operator at Idaho Falls came and took us out to supper. I had lost a button off my shirt and the lady at a general store, sewed it on. The button cost a nickel. That was a friendly town.

Evans: I guess Mary Lou was getting cold.

King: That was the fall that we moved to Juneau. We had just been in that house that we bought for a month when I went off on this junket. It was warm then in October and we didn't get back until early December.

Evans: I knew Smitty – he would keep you on about as long as he could so I had an agreement with him that he wouldn't call me down there until my airplane was ready to go and bring it back to Alaska. I learned about airplanes and a lot about those Beavers from working with Jerry. Jerry was always a good person to be around. I think he had a hard time on that trip.

King: Well, thanks, Chuck. I think this was a good contribution to the "cause." I hope so. ((end of tape #5))

*Transcribed from tapes by:
Mary E. Smith
4120 Dorothy Drive
Anchorage, AK 99504
907/333-0092*